ABSTRACT

A gas separation system includes a stator, and a rotor rotatably coupled to the stator, and at least one surge absorber in communication with the stator. The stator includes a stator valve surface and a plurality of function compartments opening into the stator valve surface. The rotor includes a rotor valve surface in communication with the stator valve surface, and a plurality of flow paths for receiving adsorbent material therein. The rotor also includes a plurality of apertures provided in the rotor valve surface and in communication with the flow paths for cyclically exposing the flow paths to the function compartments. The surge absorbers are configured to reduce pressure variations in the function compartments and to maintain each function compartment at one of a plurality of discrete pressure levels. In this manner, substantially uniform gas flow can be maintained through the function compartments and the flow paths without recourse to multistage compression machinery.

INTELLECTUAL PROP.\139365_3
June 12, 2000